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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,316	10/11/2003	Douglas G. Nelson	0685-152	3310

7590 01/10/2005

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EXAMINER

COLLINS, TIMOTHY D

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,316

Applicant(s)

NELSON, DOUGLAS G.

Examiner

Timothy D Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A. SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/11/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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2. Claims 56-58 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by USPGPUB 2003/0093193 to Pippenger.

3. Claims 59-60 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by USPN 6,584,383 to Pippenger.

4. Claims 56, 57, 59 and 60 are rejected under 35 U.S.C. 102(a) as being anticipated by <http://www.skirsch.com/politics/plane/disable.htm> (hereinafter called "safe").

a. Re claim 56, "safe" discloses a method of securing an aircraft against unauthorized direction by detecting an "imminent" threat as seen in page 5 under the headline "SAFE Mode". Also safe discloses triggering a security mode (safe mode) whereby manual control of the aircraft navigation is disabled and automatic control of aircraft navigation is commenced in response to the triggering of the security mode, as can be seen in the same section of page 5.

b. Re claim 57, "safe" discloses automatically selecting and landing at a nearest safe site based on a database inherently, as seen in the section of "safe" under the "SAFE Mode" heading. Also the reference discloses landing at one of the sites by having a flight path that terminates at the landing site, inherently. This is because you cannot land somewhere without having your flight path terminate at the landing site.

c. Re claim 59, "safe" discloses a security navigation system comprising an alarm interface to an alarm source for receiving an alarm signal, because this is the signal from the button which is transmitted to the autopilot which receives it.

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"Safe" also discloses a control interface because the plane has control over it's actuators and control surfaces through the autopilot. Also the reference discloses inherently a sensor interface because the aircraft is capable of flying itself to the nearest airport and therefore it must inherently have sensors to determine where the aircraft is with respect to the airport. This can be done with GPS according to the reference and therefore the sensor in this case is the GPS antennae and receiver. Other inherent sensors are the navigation radios for IFR flight which have antennae and the radio receivers themselves. Also it discloses that the manual navigation control is taken away and given to the automatic control. All of this can be seen in pages 5 and 6.

d. Re claim 60, "safe" discloses that the alarm source is a manual actuator manipulatable by a human operator as seen in page 5 under the heading "SAFE Mode" 4 lines down. The reference states "the pilot presses the button", this is human operation of the manual actuator or panic button.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over "safe" as above and also in view of FR 2,584,842 to Bortheyre. The translation by the USPTO will be used for this reference, hereinafter called PTO.

e. Re claim 58, "safe" may not specifically state that the aircraft may be remotely operated after entry into the security mode. However PTO does teach of a security mode wherein the aircraft is remotely operated. Note: in the related parent of this case, the applicants representative stated that this is what happens in the PTO reference. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of PTO into the device of "safe" so as to allow for the control tower to control the aircraft as taught by PTO. This would also be done as an added piece of security so as to be sure that there would not be any malfunctions of the automatic landing systems to assure a safe landing of the passengers. This is just another redundant system in an aircraft, and redundant systems are very old and well known in the art. Redundancies increase the safety of the aircraft and further assure survivability of the aircraft when damage is sustained to one system.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses automatic landing systems for aircraft.

a. Air Safety Week, September 20, 1999, "Loss of Control", Volume 13 No.

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- b. Aviation Week and Space Technology, October 15, 2001, "It's Not Simple to Turn Airliners Into UAVs", Volume 155, No. 16, Pg. 69
- c. The New York Times, April 11, 2002, Thursday, Late Edition-Final, Section G, Page 1, Column 2, Circuits, "Can Computers Foil Air Pirates?"
- d. Aviation Week and Space Technology, January 1, 2001, "Navy Looks to JPALS for Anti-Jam GPS", Vol. 154, No. 1, Pg. 60
- e. <http://www.raytheon.com/newsroom/briefs/jpals.html>
- f. http://www.worldmag.com/world/issue/10-20-01/national_1.asp
- g. http://www.acfnewsresource.org/general/hijack_deterrant.html
- h. <http://www.raytheon.com/newsroom/briefs/022102.html>
- i. Associated Press, November 23, 1991, Saturday, AM Cycle, "NASA Worried About Astronaut Stamina, Aims for Autopilot Landings"
- j. Aviation Week and Space Technology, April 24, 1978, "Air Inter's A-300 Autolandings Routine", Aviation Week Pilot Report pg. 45

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D Collins whose telephone number is 703-306-9160. The examiner can normally be reached on M-Th, 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 703-308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Timothy D. Collins
Patent Examiner
Art Unit 3643


PETER M. POON
SUPERVISORY PATENT EXAMINER

1/4/05